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If You Are Able to Control Yourself, I Will Trust You: The Role of Perceived Self-Control in Interpersonal Trust

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The present research tested the hypothesis that perception of others' self-control is an indicator of their trustworthiness. The authors investigated whether, in interactions between strangers as well as in established relationships, people detect another person's self-control, and whether this perception of self-control, in turn, affects trust. Results of 4 experiments supported these hypotheses. The first 2 experiments revealed that participants detected another person's trait of self-control. Experiments 3 and 4 revealed that participants also detected the temporary depletion of another person's self-control. Confirming the authors' predictions, perceived trait and state self-control, in turn, influenced people's judgment of the other person's trustworthiness. In line with previous research, these findings support the positive value of self-control for relationships and highlight the role of perceived self-control for the development of a fundamental relationship factor: trust.

Keywords: trust, self-control, interpersonal perception, interpersonal judgment

Trust is necessary for people to live together, cooperate with each other, and coordinate efforts and behavior. On a daily basis, people encounter numerous interdependent social situations in which trust is essential. But because others' behavior is to some extent unpredictable, interdependent situations necessarily involve some degree of uncertainty. Will Mary cooperate, will she act selfishly, or will she try to hurt me? Uncertainty and risk are intrinsic properties of interdependent situations; thus, in order to function in social contexts and maintain healthy relationships, people need to trust that the other person will act favorably toward them. But not everybody is trustworthy. Why do people trust certain partners more than others? How do they know whom to trust?

Trust is integral to a host of social interactions and, accordingly, has been studied across disciplines, including economics, medicine, law, religion, sociology, and psychology. In psychology, research mainly has focused on identifying dispositional characteristics that make people more or less prone to be trusting (Brennan & Shaver, 1995; Gurtman, 1992; Keelan, Dion, & Dion, 1994; Mikulincer, 1998; Rotter, 1971; Ryder & Bartle, 1991; Shapiro & Swensen, 1977; Simpson, 2007; Sorrentino, Holmes, Hanna, & Sharp, 1995). Individual differences in whether one extends trust to others are important. Nevertheless, because trust is an inherently interpersonal phenomenon, the interaction partner is also a key component of the equation. Hence, it is necessary to consider not only the actor's (*trustor*) characteristics but also the partner's (*trustee*) characteristics.

The present research examines a primary factor that people may use to gauge others' trustworthiness: perceptions of the other person's level of self-control. We propose that in interactions between strangers as well as in established relationships, people detect the level of another person's self-control (both as a dispositional trait and temporary state), which, in turn, affects their perception of that person's trustworthiness.

Conceptualizing Trust

Although many scientists study trust, to date there is no universally accepted definition. Most definitions, however, do agree that trust is a positive expectation toward another person's behavior. For example, Robinson (1996) defined trust as a person's "expectations, assumption, or belief about the likelihood that another's future actions will be beneficial, favorable, or at least not detrimental to one's interests" (p. 576).

Trust arises in a situation in which three conditions are fulfilled. A first necessary condition is *interdependence* between two people: A person's outcome cannot be achieved without reliance upon another person.

The second condition is *risk*: A person realizes that something will be lost if the partner does not act favorably toward the self. When two people are interdependent and their interests correspond (i.e., what is good for the self is also good for the partner), then there is little risk: Because the desired outcome is good for both partners, the other will likely act favorably. On the contrary, when two people are interdependent but their interests do not correspond, in the so-called strain-test situations, trust becomes relevant (Holmes & Rempel, 1989; Wieselquist, Rusbult, Forster, & Agnew, 1999). In these situations, the actions that benefit the indi-

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vidual differ from the actions that benefit the partner. People in these strain-test situations face an interdependence dilemma: On the one hand, they have reasons to pursue their immediate self-interest. On the other hand, they have reasons to promote their partner's interests (e.g., to maintain the relationship, to follow social norms, to benefit a third party). For example, on a Friday night, John asks Mary's help to finish his work: She is an expert on the topic and the only one who can help him. Mary, however, has made plans to go to the theatre. In this case, Mary faces an interdependence dilemma: Either she pursues her self-interest (going to the theatre) or she promotes John's interest (helping him with work). In this situation, John's outcomes are at risk because there is uncertainty about how Mary is going to respond, self-interested or in John's interest and her relationship with him.

The third necessary condition is *free choice*: In situations involving interpersonal uncertainty, people can choose to make themselves vulnerable and rely on the partner to achieve the best outcome or withdraw in order to find alternative solutions (and perhaps settle for a poorer outcome). Imagine John wants to share important secret information about his company with someone. Will he share this information with his colleague Mary, knowing that Mary has two options? She can either use the information to pursue her own interests (e.g., use the secret information to get an advancement in her career) or keep it secret to pursue John's interests. If John decides to share the information with Mary, it is because John chooses to trust Mary and believes that she will react in his interest rather than in her own.

Why Do We Trust Others?

Trust is a dyadic process that involves two individuals, the trustor and the trustee. To understand the reasons why trust develops, we need to consider the characteristics of both individuals. Although research on the trustee side is scarce, some data are known. R. C. Mayer, Davis, and Schoorman (1995) suggested three trustee aspects that lead to trust: ability, benevolence, and integrity. *Ability* is a group of skills, competencies, and characteristics that enable the trustee to exert influence in a specific domain. Many scholars consider ability an essential element of trust (e.g., Cook & Wall, 1980; Deutsch, 1960; A. P. Jones, James, & Bruni, 1975; Sitkin, & Roth, 1993). For example, people may trust their financial advisors, because they assume that their advisors have the knowledge and know-how to make better financial decisions than they could make on their own. *Benevolence* is the belief that the trustee has good intentions toward the trustor due to some specific attachment or history with the trustor (e.g., friends). Finally, *integrity* is the belief that the trustee adheres to principles and values acceptable to the trustor (e.g., a strong sense of justice).

Although they have different roots, benevolence and integrity both reflect a trustor's expectation that the trustee will show benevolent behavior because she is motivated to do so. Thus, trust can be considered as being influenced by two trustee characteristics: the trustee's *ability* to perform a particular behavior and the trustee's *motivation* to act favorably toward the trustor.

Trustors typically infer ability and motivation from previous behaviors of and experience with the trustee (cf. Heider, 1958; Weiner, 1986). For example, Wieselquist et al. (1999) showed that partners' sacrifice and accommodative behavior influence people's level of trust in their partners. Engaging in sacrifice and accommodative behaviors allows partners to solve the interdependence dilemma by forgoing their self-interest for the good of the relationship (Kelley, 1983). Wieselquist et al. proposed that these prorelationship behaviors provide people with unambiguous evidence that the partner has benevolent motives because he or she is committed to the relationship. We propose that these behaviors communicate not only that the partner is motivated but also that the partner has the ability to enact these behaviors despite the costs that these behaviors may entail. Indeed, because the nature of these behaviors is beyond self-interest, prorelationship behaviors are costly and effortful and require the exertion of self-control (Balliet, Li, & Joireman, 2010; Finkel & Campbell, 2001; Pronk, Karremans, Overbeek, Vermulst, & Wigboldus, 2010). Thus, by succeeding in strain-test situations and performing prorelationship behaviors, a trustee can communicate a possession of the *motivation* (commitment to the relationship) and the *ability* (self-control) to act favorably toward the trustor (Finkel & Campbell, 2001).

Self-Control as General Ability

In previous studies on trust, ability has been considered to be a specific set of skills within a specific domain (Cook & Wall, 1980; Deutsch, 1960; A. P. Jones et al., 1975; Mayer et al., 1995; Sitkin, & Roth, 1993). The present research adopts a broader view by considering the trustee's self-control as an indicator of general ability to handle most situations involving trust. Self-control is the self's ability to alter or override its unwanted responses so as to bring them into agreement with a standard (e.g., Baumeister, Heatherton, & Tice, 1993). Thus, by exerting self-control, people can change their thoughts, emotions, and behaviors in line with the self's desires or the situation.

Self-control can vary across individuals (trait) and across situations (state). People differ in their dispositional self-control (Tangney, Baumeister, & Boone, 2004). Across time and situations, some people are better than others in altering their internal states, inhibiting undesirable behaviors, and exhibiting desirable behaviors even if costly. Self-control also varies across situations. Empirical evidence suggests that self-control relies on a limited resource that becomes depleted by prior exertion of self-control (Baumeister & Heatherton, 1996). In classic studies manipulating state self-control, half the participants engage in a task requiring the exertion of self-control (e.g., suppressing emotions or thoughts while watching an emotional movie; Muraven, Tice, & Baumeister, 1998), while the other half performs a comparable but neutral task (e.g., watching the same movie without emotion regulation instructions). Subsequently, all participants perform a second, unrelated task that requires self-control (e.g., attempting to solve unsolvable anagrams). Compared with participants who performed the neutral task, participants who had earlier been engaged in self-control (and presumably have depleted their self-control resources) generally perform poorer on the second task (e.g., Baumeister, Bratslavsky, Muraven, & Tice, 1998; Muraven et al., 1998).

Self-control may have evolved to manage the clash between two motivations: natural impulses and cultural demands (Baumeister & Vohs, 2007). Natural impulses are characterized by primitive hedonic reactions and selfishness, whereas cultural demands are characterized by a system of standards, rules, and norms that govern life in groups (Baumeister, 2005; Hofmann, Friese, &

Strack, 2009). Thanks to self-control, people can refrain from selfish impulses and instead act according to cultural demands. One crucial motivation underling the willingness to adhere to cultural demands is the desire for social acceptance (Baumeister & Vohs, 2007). Given the importance of social belongingness and acceptance for human survival (Baumeister & Leary, 1995; Deci & Ryan, 2000), people (mostly) learn that although selfish behavior may be beneficial in the short-run, it ultimately leads to rejection from others.

Not surprisingly, people use much of their self-control to restrain selfish motivations and adhere to cultural demands (Heatherton & Vohs, 1998). Most cultural systems, through religion, morals, and social norms, promote these prosocial behaviors because they benefit the social system (DeWall, Baumeister, Gailliot, & Maner, 2008). Thus, although self-control is a global ability that enables the self to bring its responses into agreement with standards, the content of those standards oftentimes are a function of a prosocial motivation. Therefore, self-control frequently results in prosocial behaviors that benefit interdependent relationships.

Consistent with this idea, research has shown that self-control is a crucial factor for good interpersonal functioning. As compared with people low in self-control, people high in self-control experience greater family cohesion and have less conflictive relationships. They have a more secure attachment style, engage in more perspective-taking, and show more empathy and less anger and aggression in relationships (Tangney et al., 2004). People high in self-control are also more likely to help strangers (DeWall et al., 2008). Furthermore, when involved in romantic relationships, high-self-control individuals are better able to suppress feelings of attraction to alternative partners (Pronk, Karremans, & Wigboldus, 2010; Ritter, Karremans, & van Schie, 2010; Vohs & Baumeister, 2010)[1] and to engage in prorelationship behaviors, such as accommodation (Finkel & Campbell, 2001) and forgiveness (Balliet et al., 2010; Pronk et al., 2010). Finally, those with strong self-regulatory skills are better able than others with poor self-regulatory skills to keep promises made to their romantic partners (Peetz & Kammrath, 2010).

As mentioned, trust is likely to arise in interdependent situations (especially strain-test situations) that involve risk and in which the individual can freely choose to rely on the other. We propose that high-self-control people are perceived relatively less risky partners and therefore are more often chosen as people to rely on than low-self-control people. According to interdependence theory (Kelley & Thibaut, 1978; Rusbult & Van Lange, 1996), when confronted with social dilemmas in strain-test situations, people's immediate reaction is to satisfy short-term self-interests. Self-control enables people to inhibit their first impulse and instead act according to broader considerations (e.g., their partner's interests, relationship interests, social norms, values, ideals, or long-term goals). Thus, as compared with people low in self-control, people high in self-control are more likely to forgo their immediate self-interest and act in a favorable way toward others. Also in situations in which the interests of two individuals correspond, people high in self-control may be trusted more than people low in self-control. For example, in a doctor–patient relationship, in which both individuals are interested in making the patient better, a high-self-control doctor will not be constrained to act impulsively. Rather, she or he will be able to choose, from a broad repertoire of behavioral responses, the response that maximizes the positive outcome for both individuals (the patient's health). Thus, perceiving high levels of self-control in a partner should signal that the partner can be relied on in most situations calling for trust.[2]

Research Overview

In the present research, we tested the role of perceived level of trustees' self-control on trust. We propose that people infer the level of another person's self-control from her or his behavior, which, in turn, influences their perception of her or his ability to act in a trustworthy manner, even above and beyond her or his desire to do so. The focus of our research was, therefore, on the link between a trustee's ability (self-control) and the trustor's trust, controlling for the trustee's motivation (e.g., commitment or prosocial attitude). We hypothesize that to the extent that a person is perceived to possess good self-control (both as a general personality trait and as a temporary state), she or he will be trusted more than a person poor in self-control. Moreover, we predict that the link between perceived self-control and trust should occur irrespective of whether the interaction is between close partners or strangers.

We tested these predictions in four experiments. In Experiments 1 and 2, we examined the link between perceived trait self-control and trust; in Experiments 3 and 4, we examined the link between perceived state self-control and trust. Furthermore, Experiment 2 focused on ongoing relationships, and Experiments 1, 3, and 4 focused on strangers. In Experiment 1, we examined whether people infer trait self-control from behavior that requires self-control and whether this inference, in turn, influences people's willingness to trust a stranger. In Experiment 2, we assessed interpersonal and intrapersonal behaviors that were hypothesized to influence the perception of the partner's (here, married spouses') trait self-control and examined whether perceived self-control mediates the link between these behaviors and trust. In Experiment 3, we investigated whether people can detect a momentary depletion of a stranger's self-control and whether this perception of self-control depletion decreases trust toward the stranger. Finally, in Experiments 1–3, we assessed trust with a self-report measure; in Experiment 4, we replicated Experiment 3 in a strain-test situation using the trust game, a behavioral measure of trust (Berg, Dickhaut, & McCabe, 1995).

[1] Pronk et al. (2010) found that high levels of executive functioning are associated with less attention to alternatives and with greater forgiveness in relationships. Executive functioning is closely associated with self-control. It has been argued that self-control is one of the self's major executive functions. Thus, to a certain degree, the two concepts overlap (Barkley, 2001; Baumeister, Schmeichel, & Vohs, 2007; Hayes, Gifford, & Ruckstuhl, 1996), and we can assume that if these behaviors are associated with executive functioning, then they will also be associated with self-control.

[2] Of course, although in most situations self-control will signal the possibility of a prosocial behavior and, therefore, will increase trust, there are boundary conditions to this assumption. In some situations, the perception of self-control may, on the contrary, impair trust. This is likely to be the case in settings in which the individual might assume that the partner wants to adhere to some standards that will have negative outcomes for the individual (e.g., competitive setting). In this case, higher self-control may be associated with greater distrust. We further elaborated this point in the General Discussion section.

Experiment 1

We tested the link between perceived trait self-control and trust in interactions between strangers in Experiment 1. Abundant research shows that observers infer a correspondence between people's actions and internal dispositions (E. E. Jones & Davis, 1966). In fact, people instantly and automatically make dispositional trait inferences upon seeing another act (Uleman, 1989). Given these findings, perceivers should make inferences about behavior indicative of self-control, insofar as it requires forgoing immediate self-interest for the pursuit of long-term goals.

We investigated whether self-control, or the ability component of trust, is readily detected by people through the observation of behavioral cues. We asked participants to form an impression of a stranger who, in the past, had performed a behavior that required high versus low self-control. We examined whether people generalized from this single behavior and inferred the presence (or absence) of trait self-control. In addition, we tested whether their perceptions of the stranger's self-control affected their perception of trustworthiness of this person. Last, we also assessed whether high-self-control others are more likable than low-self-control others.

Method

Participants. Participants were 40 individuals, 26 women and 14 men. They were recruited on the campus of the Vrije Universiteit, Amsterdam, and were paid € 2.50 (about U. S. $3.32) for taking part in the experiment. Participants were 22.08 years old, on average. Upon arrival at the laboratory, participants were randomly assigned to one of two experimental conditions (high self-control behavior vs. low self-control behavior).

Procedure. Participants' first job was to write about an event that had happened to them in the previous week. This task was to support the cover story that there was ostensibly another participant who was doing the same task. Their sheets, then, would be exchanged in order to get to know each other before having an interaction. When finished, participants received the form that was supposedly written by the other participant. As a function of condition, one of two stories was given to participants. One implied that the writer behaved in a self-controlled manner, whereas the other story implied that the writer behaved in a less self-controlled manner, following his or her impulses (see the Appendix).

Participants were asked to form an impression of the other participant and reply to questions about him or her on the computer. The computer randomly presented questions from a set of four questionnaires. To assess *perceived other's trait self-control*, an adapted version of the Tangney et al. (2004) Self-Control Scale (11 items; e.g., "I think that the other participant has a hard time breaking bad habits"; Finkenauer, Engels, & Baumeister, 2005; $\alpha = .88$) was used as well as three items that directly assessed trait self-control (e.g., "I think that the other participant has a lot of self-control"; $\alpha = .95$). *Trust* (three items; "The other participant is a trustworthy person"; $\alpha = .71$) and *liking* (three items; "The other participant is a nice person"; $\alpha = .78$) were measured. Finally, participants completed semantic differential items (Osgood, Suci, & Tennenbaum, 1957). Specifically, participants evaluated the other participant on a continuum between two opposing adjectives on a 9-point scale (e.g., bad–good, 0 = *extremely bad*, 4 = *neutral*, 8 = *extremely good*). A total of nine paired adjectives were selected that represented Osgood et al.'s three main factors: *evaluation* (three paired adjectives; e.g., "negative–positive"; $\alpha = .64$), *potency* (three paired adjectives; e.g., "powerful–powerless"; $\alpha = .64$), and *activity* (three paired adjectives; e.g., "calm–excitable"; $\alpha = .55$).

Results

Key findings. To check whether participants attribute higher dispositional self-control to another participant who told a story about a high-self-control behavior than to another participant who told a story about a low-self-control behavior, we performed an independent-samples t test (high-self-control vs. low-self-control behavior condition) on the two measures of perceived other's self-control. As intended, in the high-self-control behavior condition, the other participant was perceived to have more self-control on the Tangney et al. (2004) and the three-items measure ($M = 3.61$, $SD = 0.16$ and $M = 4.53$, $SD = 0.24$, respectively) than in the low-self-control behavior condition ($M = 2.01$, $SD = 0.15$ and $M = 1.13$, $SD = 0.23$), $t(38) = 7.15$, $p < .001$; and, $t(38) = 10.09$, $p < .001$, respectively.

To examine whether participants trusted another participant more when he or she displayed high self-control behavior than when he or she displayed low self-control behavior, we performed an independent-samples t test (high-self-control vs. low-self-control behavior condition) on trust. Consistent with our predictions, high-self-control behavior led to greater trust ($M = 3.98$, $SD = 0.19$) than low-self-control behavior ($M = 2.49$, $SD = 0.19$), $t(38) = 5.42$, $p < .001$.

We conducted mediation analyses using the bootstrapping method (Preacher & Hayes, 2004) to examine whether the perception of the other participant's trait self-control mediated the effect of high- versus low-self-control behavior condition on trust. The bootstrap estimates are based on 5,000 bootstrap samples. The results revealed that the total effect of high- versus low-self-control behavior on trust (total effect = 1.46, $p < .001$) became nonsignificant when the perception of self-control was included in the model (direct effect of high- vs. low-self-control behavior condition = .16, $p = .616$ and $-.51$, $p = .165$, respectively, for the Tangney et al., 2004, scale and for the three-items measure). Furthermore, the analyses revealed that the total indirect effect was significant with a point estimate of 1.30 and a 99% confidence interval (CI) of .31–1.86 for the Tangney et al. scale and a point estimate of 1.96 and a 99% CI of .55–3.08 for the three-items measure. Thus, perceived other's self-control fully mediated the effects of the high- versus low-self-control behavior condition on trust.

Auxiliary analyses. To test whether participants liked a person who performed a high-self-control behavior more than a person who performed a low-self-control behavior, we performed an independent-samples t test (high-self-control vs. low-self-control behavior condition) on liking. Results revealed no significant difference between the two conditions, $t(38) = 0.53$, $p = .601$. Analyses on the three dimensions of the Osgood et al. (1957) scale revealed a significant effect of potency, in that a person who performed a high-self-control behavior was perceived as more powerful ($M = 4.47$, $SD = 0.27$) than a person who performed a

low-self-control behavior ($M = 3.67$, $SD = 0.25$), $t(38) = 2.20$, $p = .034$. We found no effects for evaluation and activity between the two conditions, $t(38) = -0.03$, $p = .976$; and, $t(38) = -0.94$, $p = .354$, respectively.

Discussion

Consistent with our hypothesis, this experiment provides support for the idea that, among strangers, a high-self-control person is trusted more than a low-self-control person before interacting for the first time. This experiment showed that a description of past behavior that had required self-control led people to attribute self-control to the person. This, in turn, affected people's trust in that person. Furthermore, this experiment revealed that, in an interaction between strangers, the perception of self-control influences trust but not liking.

Experiment 2

Experiment 2 had two major purposes: to (a) replicate our findings in the context of partners in a close relationship and (b) test which behaviors in a close relationship are perceived as diagnostic of self-control and, in turn, influence trust in the partner. Figure 1 displays our model.

We examined three behaviors (two interpersonal and one intrapersonal) that are linked to self-control: forgiveness, reliability, and goal achievement. Previous research has highlighted the role of self-control in forgiveness (Balliet et al., 2010; Pronk et al., 2010). Forgiveness is typical in strain-test situations: When faced with a partner's transgression, people with high self-control are able to refrain from retaliation, and instead act constructively. Similarly, people with high self-control are able to be reliable and behave in a conscientious manner (e.g., completing assignments, fulfilling commitments; Tangney et al., 2004). Finally, people with high self-control are good in achieving goal accomplishment (e.g., school achievement) (Tangney et al., 2004).

To increase the generalizability of our findings, in Experiment 2 we gathered data from married couples. We examined whether participants who observed their partner to be forgiving, reliable, or successful in his or her goal accomplishment made dispositional inferences about their partner's level of self-control (i.e., replicating Experiment 1), and whether perceived partner's self-control influenced participants' trust in their partner. To ensure that the relation between the interpersonal behaviors and trust was not attributable to alternative motivational processes, such as commitment and long-term orientation (Finkel, Rusbult, Kumashiro, & Hannon, 2002; Wieselquist et al., 1999), we also performed our main analyses controlling for commitment, long-term orientation, and partner appreciation.

Figure 1. Model of Experiment 2. Intra- and interpersonal behaviors determine other's self-control that determines trust.

Previous research has highlighted the role of trust in promoting commitment in close relationships (Murray, Holmes, & Collins, 2006; Wieselquist et al., 1999). Therefore, we examined whether people tend to be more committed in relationships with partners high in self-control than with partners low in self-control, and whether trust mediated the relation between the perception of the partner's self-control and commitment. Because we collected data from both partners, this experiment also allowed us to examine the relation between people's perception of their partner's self-control and the partner's self-reported self-control. To explore the impact of the partner's self-reported self-control, we conducted the key analyses with participants' perception of their partner's self-control substituted for the partner's self-reported self-control. Finally, we explored the interplay between perceived ability (perceived self-control) and motivation (commitment, perceived long-term orientation, and perceived appreciation). Do they interact in predicting trust? Are they both necessary for trust to occur? Or can one of the two compensate for the lack of the other? We addressed these questions in Experiment 2.

Method

Participants. Participants were partners in 185 heterosexual married couples. They were recruited via the municipalities in which they got married (for a description, see Finkenauer, Kerkhof, Righetti, & Branje, 2009). Data are from Time 3 of a three-wave longitudinal study. At Time 3, the mean age of husbands was 34.07 years, and the mean age of wives was 31.20 years. Nearly all couples were Dutch (98.5% of the husbands and 96.4% of the wives). At the beginning of the study, 29% of the husbands and 25% of the wives had followed lower level education that prepares for blue-collar work, 10% of the husbands and 9% of the wives had followed middle education that prepares for higher levels of professional work, and 54% of the husbands and 63% of the wives had followed higher education that prepares for university. Seven percent of the husbands and 4% of the wives reported having followed other types of education. Two percent of the husbands and 7% of the wives were not doing paid work. The modal level of working hours was 33–40 hr a week (69% of the husbands and 50% of the wives). Couples had been romantically involved for an average of 7.71 years ($SD = 3.03$) and had been living together for an average of 5.81 years ($SD = 2.31$). As payment for their participation, couples received €15.00 (about U. S. $19.90) and a pen set.

Procedure. Partners in each couple independently completed an extensive questionnaire at home, in the presence of a trained interviewer. The questionnaire took approximately 90 min to complete. Partners were instructed not to discuss their questions or answers with each other, and when possible, partners were seated in separate rooms. *Perceived partner forgiveness* was assessed using four items of the Brown (2004) Tendency to Forgive Scale adapted for ongoing relationships (four items; e.g., "When my partner hurts or angers me, I am quick to forgive him or her"; 1 = *do not agree at all*, 5 = *agree completely*; $\alpha = .71$), *perceived partner reliability* (three items; e.g., "My partner is always on time"; $\alpha = .77$) and *perceived partner goal achievement* (five domains; e.g., "Since we met, my partner has experienced changes in his or her career; 1 = *moved away from his/her ideal*; 5 = *moved toward his/her ideal*; $\alpha = .74$). As in Experiment 1, the

version of the Tangney et al. (2004) Self-Control Scale was adapted to assess *perceived partner's self-control* (Finkenauer et al., 2005; $\alpha = .72$), and the Rempel, Holmes, and Zanna (1985) instrument was used to assess *trust* in the partner ($\alpha = .89$). Finally, *commitment* and *partner commitment* were assessed using the Rusbult, Martz, and Agnew (1998) scale (eight items; $\alpha = .93$), *perceived partner long-term orientation* (one item; "I know that my partner will always be there to support and encourage me") and *perceived partner appreciation* (four items; "The longer our relationship lasts, the more my partner appreciates me."; $\alpha = .65$).

Results

Analysis strategy. The data provided by two partners in a given relationship are not independent. Accordingly, we analyzed our data using hierarchical linear modeling (Raudenbush & Bryk, 2002). This technique accounts for the nonindependence of observations by simultaneously examining variance associated with each level of nesting. In our study, data from the two partners were nested within couple. Following recommended procedures for dyadic research, we represented intercept terms as random effects and represented slope terms as fixed effects (Kenny, Mannetti, Pierro, Livi, & Kashy, 2002).

Key findings. To test our model (see Figure 1), we assessed whether (a) the examined behaviors predicted trust in the partner, (b) the examined behaviors predicted perceived partner's self-control, (c) perceived partner's self-control predicted trust in the partner, and (d) perceived partner's self-control was a mediator between the examined behaviors and trust.

First, we regressed trust onto each behavior. Consistent with predictions, perceived partner forgiveness, perceived partner reliability, and perceived partner goal achievement were positively associated with trust (βs = .32, .47, and .27, all ps $< .001$). Second, we regressed perceived partner's self-control onto each behavior. Perceived partner forgiveness, perceived partner reliability, and perceived partner goal achievement were positively associated with perceived partner's self-control (βs = .28, .38, and .12, all *ps* ranged from .020 to $< .001$). Third, we regressed trust onto perceived partner's self-control. Perceived partner's self-control was associated with trust ($\beta = .44$, $p < .001$). Finally, when the examined behaviors and perceived partner's self-control were all included as predictors of trust, perceived partner's self-control was significant (βs = .38, .31, and .42, all ps $< .001$), whereas the effects of behaviors were reduced (βs = .22, .37, and .23, all ps $< .001$). A Sobel's test revealed that perceived partner's self-control partially mediated the effects of behaviors on trust (zs = 4.76, 5.20, and 2.27, all ps ranged from .023 to $<.001$).

Auxiliary analyses. To ensure that the effect of the interpersonal behaviors on trust were mediated by perceived other's self-control and not by alternative mechanisms (e.g., motivational processes associated with commitment), we performed the meditational analyses controlling for possible confounds, such as partner commitment, perceived partner long-term orientation, and perceived partner satisfaction. Results revealed that when controlling for alternative mechanisms, perceived self-control remained a significant mediator of the relation between the two behaviors (forgiveness and reliability) and trust (βs = .33 and .28, both ps $< .001$; Sobel test zs = 4.81 and 5.49, both ps $< .001$). Furthermore, we assessed whether participants were more committed to partners high in self-control than to partners low in self-control and whether trust mediated the effect of perceived self-control on commitment. Perceived partner's self-control was positively associated with commitment ($\beta = .30$, $p < .001$), and trust was positively associated with commitment ($\beta = .57$, $p < .001$). When perceived self-control and trust were both included as a predictor of commitment, trust was significant ($\beta = .54$, $p < .001$), whereas perceived self-control became nonsignificant ($\beta = .06$, $p = .208$). A Sobel's test revealed that trust fully mediated the effects of perceived self-control on commitment ($z = 7.40$, $p < .001$).

We also examined the extent to which participants' perception of their partner's self-control corresponded to the partner's self-reported self-control and whether the partner's self-reported self-control influenced participants' trust. Results revealed that perceived partner's self-control and partner's self-reported self-control were associated ($\beta = .18$, $p < .001$), indicating a moderate level of self–other agreement on this dimension. We also assessed whether the partner's self-reported behaviors (forgiveness and goal achievement)[3] were linked to participants' perceptions of their partner's self-control. Results revealed that partner's self-reported forgiveness was associated with perceived partner's self-control ($\beta = .21$, $p = .001$), whereas partner's self-report of goal achievement was not associated with perceived partner's self-control ($\beta = .05$, $p = .513$). Furthermore, partner's self-reported self-control was not associated with trust ($\beta = -.09$, $p = .356$).

Finally, to investigate the interplay between perceived ability and motivation, we regressed trust onto perceived partner's self-control, the motivation variables (i.e., partner commitment, perceived partner long-term orientation, and perceived partner satisfaction), and their interactions. Results consistently revealed a main effect of perceived self-control (βs = .47, .37, and .41, all ps $< .001$) and main effects of the motivational variables (βs = .26, .50, and .38, all ps $< .001$), but no significant interactions (βs = $-.04$, $-.03$, and $-.04$, all ps ranged from .418 to .322).

Discussion

Extending our findings to the context of ongoing close relationships, the findings of this experiment provided good support for the link between perceived trait self-control and trust. Consistent with the previous experiment, Experiment 2 showed that people infer the level of a partner's self-control by observing behaviors that are diagnostic of self-control (forgiveness, reliability, and goal achievement). People's perception of their partner's self-control, in turn, influences their perception of the partner's trustworthiness. These results held when controlling for partner commitment, perceived partner long-term orientation, and perceived partner satisfaction. Experiment 2 also showed that perceiving a partner to have high self-control is associated with greater commitment to that partner, because he or she is trusted more than a partner who is perceived low in self-control. Furthermore, although we found some agreement between partners regarding self-control, our findings indicate that the individual's perception of partner's self-control, rather than the partner's self-reported self-control, is the

[3] We could not investigate the link between partner's self-report reliability and participants' perception of partner self-control because in the questionnaire, we did not assess self-reports of this variable.

main predictor of trust. Finally, we did not find interactions between ability and motivation factors; perceived self-control and commitment independently predicted greater trust.

Experiment 3

Self-control is not only a dispositional trait that varies across individuals (Tangney et al., 2004), it can also vary across situations (Baumeister & Heatherton, 1996). Abundant research shows that when people exert self-control in one task, they deplete resources needed to exert self-control and, hence, have less self-control in a subsequent task. People might be familiar with and recognize these types of situations in which their own self-control resources are depleted. People know, for example, that, after having inhibited the urge to yell at their boss for an entire day, once at home, they are less able to control themselves during a fight with their spouse. Most likely people can also recognize depletion in others. In Experiment 3, we examined whether people detect that another person suffers from a temporary depletion of self-control and whether this perception can, in turn, influence their trust in that person.

In this experiment, we gave participants information about an ostensible other participant whom they had never met before. We told them that the other participant had just performed a self-control task for 2 versus 15 min. We assessed whether participants detected the other's greater depletion of self-control after the 15-min task, as compared with the 2-min task, and whether this perception, in turn, influenced trust. Methodologically, we kept constant the role of motivational processes on trust by informing all participants that the other had a favorable attitude toward cooperation. Furthermore, to ensure that our findings were not attributable to alternative processes, we also statistically controlled for liking, closeness, the perception of the other's mood and tiredness, and participants' own mood.

Method

Participants. Participants were 43 individuals, 25 women and 18 men. They were recruited on the campus of the Vrije Universiteit Amsterdam and were paid €2.00 (about U. S. $2.66) for taking part in the experiment. Participants were 22.75 years old, on average. Upon arrival at the laboratory, participants were randomly assigned to one of two experimental conditions (depleted other vs. nondepleted other).

Procedure. Participants sat in a cubicle and were given the instructions. Participants were informed that, after performing an individual task, they would have to interact with another participant who was currently in the laboratory in another cubicle. They were also told that before this interaction, they would receive some information about him or her. After the instructions, the experiment started. First, participants replied to the Stapel and Koomen (2005) Cooperative–Competitive Orientation Questionnaire (13 items; e.g., "I like to see everyone do well in games"). Next, to induce the belief that the other participant had a favorable attitude toward cooperation, participants were informed that the other participant's answers on this questionnaire scored higher than the average on the Cooperative scale. Because trust relies both on the perception of the trustee's motivation and ability, the purpose of this procedure was to keep the factor motivation constant by letting participants know that the other person had generally good intentions toward others.

Subsequently, participants started the individual task. They were told that half the participants would have to perform this task for 2 min and the other half for 15 min. Participants were also reassured that everybody would be fairly paid for the amount of time spent in the lab. All participants were told that they had randomly been assigned to the experimental condition in which they had to perform the task for only 2 min. For this task, participants watched a 2-min video (without sound) and were asked to form an impression of a woman being interviewed. Words appeared at the bottom of the screen for 10 s each (e.g., hair, sky, jump, brick). Participants were asked to focus their attention only on the woman and to actively ignore the words on the screen. Empirical experiments on self-control often use a 7-min version of this video as a depletion manipulation (DeWall et al., 2008; DeWall, Baumeister, Stillman, & Gailliot, 2007; Schmeichel, Vohs, & Baumeister, 2003; Vohs, Baumeister, & Ciarocco, 2005; Vohs & Faber, 2007). The 2-min version did not aim to deplete participants but to let them experience that this task required the exertion of self-control. Subsequently, participants received information about the ostensible other participant. In the depleted other condition, participants were told that the other participant had just performed the task for 15 min. In the nondepleted-other condition, participants were told that the other participant had just performed the task for 2 min. An explicit mention was made that this task was the only task that the other participant had performed so far.

Participants were then asked to reply to some questions about the other participant. *Perceived other's self-control* was assessed with a version of the Tangney et al. (2004) Self-Control Scale, adapting the items to measure state self-control (e.g., "At the moment, I think that the other participant would have a hard time breaking bad habits;" $\alpha = .80$). *Trust* (three items; "I think that the other participant can be trusted at the moment;" $\alpha = .81$), *liking* (one item; "I like the other participant"), and *closeness* (one item; "I feel close to the other participant") were assessed. *Perceived other's tiredness* (three items; "At the moment, I think that the other participant is tired;" $\alpha = .80$), *perceived other's mood*, and participants' *mood* were assessed with the Brief Mood Introspection Scale (Mayer & Gaschke, 1988). Finally, participants were tested for suspicion; no participant stated that there was a link between the video task and trust questions.

Results

Key findings. To check whether participants attributed lower state self-control to the other participant who performed the video task for 15 min than to the one who performed the task for 2 min, we performed an independent-samples t test (depleted-other vs. nondepleted-other condition) on the perceived other's self-control. As intended, in the depleted-other condition, the ostensible other participant was perceived to have less self-control ($M = 3.21$, $SD = 0.16$) than in the nondepleted condition ($M = 3.81$, $SD = 0.16$), $t(41) = 2.65$, $p = .012$.

To test whether participants trusted the nondepleted participant more than the depleted participant, we performed an independent-samples t test (depleted-other vs. nondepleted-other condition) on trust. Consistent with predictions, the nondepleted other was

trusted more ($M = 3.86$, $SD = 0.21$) than the depleted other ($M = 2.86$, $SD = 0.22$), $t(41) = 3.29$, $p = .002$.

We conducted mediation analyses using the bootstrapping method (Preacher & Hayes, 2004) to examine whether it is indeed the perception of the other participant's self-control that underlies the effect of depleted- versus nondepleted-other condition on trust. The bootstrap estimates are based on 5,000 bootstrap samples. The results revealed that the total effect of depleted- versus nondepleted-other condition on trust (total effect = 1.46, $p = .002$) was reduced when the perception of self-control was included in the model (direct effect of depleted vs. nondepleted other = .66, $p = .034$). Furthermore, the analyses revealed that the total indirect effect was significant, with a point estimate of .34 and a 95% CI of .02–.87. Thus, perceived other's self-control significantly, albeit partially, mediated the effects of depleted- versus nondepleted-other condition on trust.

Auxiliary analyses. To examine whether participants liked a depleted or a nondepleted other more, we performed an independent-samples *t* test (depleted-other vs. nondepleted-other condition) on liking. Results revealed no significant difference between the two conditions, $t(41) = 1.61$, $p = .116$. Furthermore, to ensure that the effect of our manipulation on trust was mediated by perceived other's self-control and not by alternative mechanisms, we performed the meditational analyses with the bootstrapping method (Preacher & Hayes, 2008) controlling for other possible mediators, such as liking, closeness, perceived other mood, perceived other tiredness, and participants' mood. Results revealed that when controlling for alternative mechanisms, the specific indirect effect of perceived self-control remained significant, with a point estimate of .37 and a 95% CI of .06–1.03. Thus, perceived self-control remained a significant mediator in the relation between depleted- versus nondepleted-other condition and trust.

Discussion

Experiment 3 replicated the link between perceived self-control and trust observed in the previous experiments. Extending the results of those experiments, Experiment 3 revealed that people are able to detect the temporary depletion of the other's self-control. The perception of depletion, in turn, influences the amount of trust on this person. These associations held when controlling for liking, closeness, perceived other mood, perceived other tiredness, and participants' mood.

Experiment 4

In Experiment 4, we sought to replicate the findings of Experiment 3 with the use of a behavioral measure, the trust game (Berg et al., 1995). In the trust game, participants decide whether to keep a monetary reward or to give some portion of it to another participant. If participants give (some portion of) the money to the other participant, then the amount given to the other triples. The other participant can then reciprocate by returning as much money to the participant as he or she wishes or keep the money for him- or herself. Because transferring money to the other participants is risky (there is no guarantee that the other will return any money), this is a typical strain-test situation.

The choice to transfer money is considered a signal of trust, in that giving money to the other means exposing oneself to the risk of exploitation by the other. In this situation, people might make one of two assumptions (Fetchenauer & Dunning, 2009): They might assume that the behavior of the other is mainly guided by self-interest and that they will not receive any money back, or they might assume that the other's behavior is guided by altruistic motives, moral principles, or social norms, and that he or she will probably reciprocate. We expected that participants will give less money to a depleted other participant than to a nondepleted other participant because they do not trust him or her to be able to inhibit his or her immediate self-interest and instead adhere to broader principles, such as equality, justice, and altruism.

In this experiment, we replicated the procedure of Experiment 3, using a confederate to pose as the other participant to increase the credibility of our procedure. Importantly, we assessed trust both with the self-report measure and with the trust game. As in Experiment 3, to ensure that our findings were not be attributable to alternative processes, we also controlled for liking, closeness, the perception of the other's mood and tiredness, and participants' mood.

Method

Participants. Participants were 48 individuals, 32 women and 16 men. They were recruited on the campus of the Vrije Universiteit Amsterdam and were paid €3.50 (about U. S. $4.65) for taking part in the experiment. Participants were 21.07 years old, on average. The data from four participants were excluded because they did not follow the instructions (e.g., they did not leave the cubicle to meet the confederate when the computer instructed them to do so). Upon arrival at the laboratory, participants were randomly assigned to one of two experimental conditions (depleted-other vs. nondepleted-other condition).

Procedure. The procedure and manipulation were identical to that of Experiment 3 with one exception: To make the situation more realistic, when participants finished the video watching task, they were introduced to a confederate, posing as the other participant. The confederate introduced herself to the participants telling them her first name and shaking their hand. Subsequently, the experimenter accompanied participants back to the cubicle to continue the experiment.

The first dependent variable was a behavioral measure of trust toward the other participant. Following the Berg et al. (1995) trust game procedure, participants were told that they had the possibility to invest their reward for participating in this experiment by transferring part of it to the other participant, whom they had just met. They were told that if they decided to transfer the money to the other participant, then the experimenter would triple the transferred amount and the other participant would decide how much (if any) of the amount to transfer back to them. For example, if participants decided to transfer € 2, they were told that the other participant would get € 6 and that she could decide how much money she wanted to transfer back to them. Participants were told that they would get to know the amount of money that the other participant decided to transfer back to them at the end of the experiment. Perceived other's self-control ($\alpha = .80$), trust ($\alpha = .81$), liking, closeness, perceived other's tiredness ($\alpha = .80$), perceived other's mood, and participants' mood were assessed as in Experiment 3. Last, participants were queried for suspicion. No

participants stated that there was a link between the video task and trust questions.

Results

Key findings. To test whether participants attribute lower state self-control to the other participant who performed the video task for 15 min than to the one who performed the task for 2 min, we performed an independent-samples *t* test (depleted-other vs. nondepleted-other condition) on the perceived other's self-control. Results revealed that in the depleted-other condition, the participant was perceived to have less self-control ($M = 3.51$, $SD = 0.14$) than in the nondepleted condition ($M = 3.94$, $SD = 0.12$), $t(42) = 2.40$, $p = .021$. To examine whether participants trusted the nondepleted participant more than the depleted participant, we performed an independent-samples *t* test (depleted- other vs. nondepleted-other condition) on the two measures of trust, the self-report measure and the trust game.[4] On the self-report measure, consistent with our predictions, the nondepleted other was trusted more ($M = 3.58$, $SD = 0.27$) than the depleted other ($M = 2.50$, $SD = 0.30$), $t(42) = 2.70$, $p = .010$. Furthermore, participants allocated more money to the nondepleted other ($M = 1.68$, $SD = 0.18$) than to the depleted other ($M = 1.05$, $SD = 0.20$), $t(42) = 2.36$, $p = .023$.

We conducted mediation analyses using the bootstrapping method (Preacher & Hayes, 2004) to examine whether perceived other's self-control mediates the effect of depleted- versus nondepleted-other condition on trust. The bootstrap estimates are based on 5,000 bootstrap samples. Examining the self-report measure of trust, the results revealed that the total effect of depleted- versus nondepleted-other condition on trust (total effect = 1.08, $p = .010$) was reduced when the perception of self-control was included in the model (direct effect of depleted vs. nondepleted-other condition = .60, $p = .115$). Furthermore, the analyses revealed that the total indirect effect was significant with a point estimate of .48 and a 95% CI of .05–1.09.

For the trust game, the results revealed that the total effect of depleted- versus nondepleted-other condition on trust (total effect = .63, $p = .023$) became nonsignificant when perception of self-control was included in the model (direct effect of depleted- vs. nondepleted-other condition = .38, $p = .159$). Furthermore, the analyses revealed that the total indirect effect was significant with a point estimate of .25 and a 95% CI of .02–.57. Thus, perceived other's self-control fully mediated the effects of depleted- versus nondepleted-other condition on the two measures of interpersonal trust.

Auxiliary analyses. To test whether participants liked a depleted or a nondepleted other more, we performed an independent-samples *t* test (depleted-other vs. nondepleted-other condition) on liking. The two conditions did not differ significantly from each other, $t(42) = 0.31$, $p = .760$. Furthermore, to ensure that the effect of our manipulation on trust was mediated by perceived other self-control and not alternative mechanisms, we performed the meditational analyses with the bootstrapping method (Preacher & Hayes, 2008) controlling for other possible mediators, such as liking, closeness, perceived other mood, perceived other tiredness, and participants' mood. Results revealed that when controlling for alternative mechanisms, the specific indirect effect of perceived self-control remained significant with a point estimate of .37 and a 95% CI of .01–1.05 for the self-report trust and with a point estimate of .28 and a 95% CI of .05–.76 for the trust game. Thus, perceived self-control remained a significant mediator in the relation between depleted- versus nondepleted-other condition and self-report trust.

Discussion

Experiment 4 replicated the findings of Experiment 3. Participants detected another person's depletion of self-control, and this influenced their judgment of the other person's trustworthiness with a self-report measure. As an important extension of Experiment 3, participants trusted (specifically, invested less money in) a depleted other less than a nondepleted other in a strain-test situation. This finding indicates that people use the perception of another person's depletion of self-control to gauge how much they can trust the other in the presence of conflicting interests, and this perception has behavioral consequences. This effect held even when statistically controlling for liking, closeness, perceived other mood, perceived other tiredness, and participants' mood.

General Discussion

Why are some people trusted more than others? How do people know on whom to rely? The present research addressed these questions by turning to the perception of one characteristic of the trustee, namely his or her self-control, as a determinant of trust.

The first two experiments demonstrated that people who are perceived to possess high dispositional self-control are trusted more than people who are perceived to possess low dispositional self-control. In Experiment 2, we examined how people form an impression of another person's trait self-control. This experiment revealed that the observation of three behaviors diagnostic of self-control (forgiveness, reliability, and goal achievement) affects people's assessment of their partner's trait self-control. Experiments 3 and 4 revealed that people can detect the temporary depletion of self-control in another person, which, in turn, influenced their judgment of the other person's trustworthiness. Furthermore, the association between perceived self-control and trust was shown in the context of an interaction with a stranger (Experiments 1, 3, and 4) as well as ongoing, close relationships (Experiment 2), highlighting the generalizibilty of the effect. Given the role that motivational factors can have on trust (e.g., commitment or cooperative attitude) (Holmes & Rempel, 1989; Schlenker, Helm, & Tedeschi, 1973; Wieselquist et al., 1999), we ensured that our findings were evident while statistically or methodologically controlling for motivational factors. Finally, our experiments revealed that, in ongoing relationships, people are more committed to high-self-control others than low-self-control others, and this relationship is mediated by trust (Experiment 2). Yet, in interactions between strangers, people like high-self-control others and low-self-control others equivalently (Experiments 1, 3, and 4).

[4] The self-report measure and the trust game were highly correlated with each other ($r = .59$, $p < .001$), indicating that both measures tap into the same construct.

Implications and Future Research

Trust is a dyadic phenomenon in which partners' motives, goals, and dispositions mutually influence and transform each other. Previous studies have mainly focused on characteristics of the trustor that make her or him prone to trust others (see Simpson, 2007, for a review) and relationship processes that enhance trust (Holmes & Rempel, 1989; Wieselquist et al., 1999). Less attention has been paid to characteristics of the trustee that make people prone to trust her or him. To our knowledge, the present work is the first to examine self-control as a key characteristic of trustees that influences the perception of their trustworthiness.

Trust arises in interdependent situations that involve risk, and in which the individual can freely choose whether to rely on the other. Our findings revealed that high-self-control others, because they are considered to be less risky partners, are more often chosen as those on whom people rely. In situations in which the interests of two individuals align, a high-self-control individual can forgo behavioral impulses and can choose from different behavioral alternatives the one that is most likely to lead to the best possible outcome for both partners (e.g., Baumeister, 2005; Tangney et al., 2004). In situations in which the interests of two individuals diverge, high-self-control people can forgo their direct self-interest and act in a more flexible manner, taking into account broader considerations (e.g., relationship considerations, moral or contextual standards, long-term interests; Balliet et al., 2010; Finkel & Campbell, 2001; Pronk et al., 2010). This behavioral flexibility makes high-self-control people trustworthy partners because they are perceived as having the ability to select and act on the behavioral options that are most beneficial for the relationship.

Future research should investigate the interplay of motivation and ability, examining whether one factor might be a stronger predictor of trust depending on the characteristics of the situation. For example, in situations in which the interests of two individuals correspond, the motivational factor may not play a strong role because people might assume that the other is willing to act in the interest of both individuals. In these situations, self-control, and the related behavioral flexibility that allows people to select the best course of action, may be especially diagnostic for trust.

On the contrary, in strain-test situations, in which the interests of two individuals diverge, both ability and motivation may play an important role. Self-control is regarded as an ability factor, in that it enables the self to respond according to some standards. Self-control is rooted in the desire of being accepted by others, however (Baumeister & Vohs, 2007; Rawn & Vohs, in press), and most of the time, it serves a prosocial motivation, which leads to positive outcomes for the relationship. People may implicitly know this and, in general, expect a prosocial response from high-self-control others. Future research should explore situations in which the motivational factor may lead people to perceive greater self-control as a gauge for distrust. For example, when an individual perceives that the other has the motivation to harm the self (e.g., in a competitive setting), a high-self-control individual might be perceived as potentially more dangerous and capable than a low-self-control other, and, therefore, be distrusted.

Our research supports existing studies that highlight the importance of self-control in long-term relationships. In particular, the perception of a partner's self-control seems to play a fundamental role in the development of long-term relationships. Previous research has shown that self-control enables people to perform prorelationship behaviors (Balliet et al., 2010; Finkel & Campbell, 2001; Pronk et al., 2010; Ritter et al., 2010; Vohs & Baumeister, 2010) that, once perceived by the partner, strengthen the dependence on the partner and the commitment of the couple (Wieselquist et al., 1999). Experiment 2 demonstrates that behaviors that require self-control signal that the partner has this trait, which results in higher trust toward the partner. Consistent with Murray et al. (2006) and Wieselquist et al. (1999), our findings also show that trust, in turn, increases commitment. People might decide to increase dependence and commitment toward high-self-control others because high-self-control others are perceived to be trustworthy partners who are likely to succeed in strain-test situations.

Moreover, perceiving self-control in a partner may favor relationships because exerting self-control can be contagious. Perceiving someone exerting self-control activates the same goal in the perceiver, enhancing his or her self-control (Ackerman, Goldstein, Shapiro, & Bargh, 2009). Such a contagion of self-control may be functional in relationships and conducive to relationship well-being. Indeed, Vohs, Finkenauer and Baumeister (in press) showed that relationship well-being is especially high when both partners have high levels of self-control.

It is notable that in our research, the perception of a stranger's self-control did not affect liking or any other evaluative attitude toward that person. Thus, although a stranger with high self-control is trusted more, he or she is not liked more than a stranger with low self-control. This is in line with previous research showing that high self-control may also have interpersonal costs. Individuals high in self-control are perceived as being less spontaneous, less extraverted, and less open to experience than individuals low in self-control (Stillman & Alquist, 2007; Zabelina, Robinson, & Anicha, 2007; see also Rawn & Vohs, in press). Thus, the perception of high self-control seems to have positive effects for the development of long-term relationships (i.e., enhanced commitment), but it may have mixed effects (increase trust but decrease appeal) for superficial relationships (e.g., interactions between acquaintances).

Strengths and Limitations

Before concluding, we should acknowledge some limitations of the present research. First, we expect that in the absence of specific information about another person's motivations, perceived self-control will lead to greater trust. Yet, only Experiment 1 provided participants with a neutral context in which they did not have knowledge about the other participant's attitude. All the other experiments were conducted in a setting that favored participants' expectation of positive motives from the other. People in close relationship may assume that the partner is willing to take their well-being into account (Experiment 2), and in Experiments 3 and 4, we told participants that the other had a positive attitude toward cooperation. Thus, our findings showed the link between perceived self-control and trust especially in a context of cooperation and positive motives.

Second, the sample of behaviors examined in Experiment 2 was limited. In future research, it would be interesting to examine how perceptions of self-control vary across different self-directed behaviors (e.g., alcohol use, exercise behavior) and other-directed behaviors (e.g., accommodation). Also, it may be interesting to

examine whether perceptions of self-control vary depending on whether the other person inhibits undesirable behavior (e.g., smoking, unsafe sex) versus engages in desirable behavior (e.g., eating healthy food) and whether this difference affect trust.

Finally, our experimental procedures allowed us to disentangle participants' inferences of trait self-control from state self-control. Indeed, many situations may allow people to differentiate between the two types of self-control. However, there may be situations in which the observation of self-controlled behavior might lead to the conclusion both that the person has high trait self-control (and therefore he or she is trustworthy) and that the person is low in state self-control (and therefore cannot be trusted). Imagine, for example, that John has a new colleague, Mary. Everybody knows that Mary does not like the new job but that, nevertheless, she handles her work duties in a careful, meticulous, and thorough way. Right after work, in private life, will John trust Mary because she showed behavior indicating high dispositional self-control, or will John distrust her, because Mary has probably depleted her self-control resources at work?

Distinguishing between trait and state self-control may be particularly relevant for people who do not share relationship history. Future research should investigate which inference is more likely to occur when the situation allows for both kinds of interpretations. We know from research that people are prone to infer a trait from the observation of a behavior (E. E. Jones & Davis, 1966) and that people tend to overestimate the impact of dispositional causes and underestimate the impact of situational causes on other people's behavior (Ross, 1977). Therefore, it is plausible that people will be more likely to use the inference of trait self-control (dispositional cause) rather than state self-control (situational cause) to determine trustworthiness.

Several strengths of this work should also be acknowledged. The link between perceived self-control and trust has been replicated in four experiments using diverse research methods and different samples. We have examined both perceived trait and state self-control. In most experiments, we have both measured and manipulated perceived self-control and, through mediation analyses, we ensured that perceived self-control was a driving mechanism between our manipulations and trust. We also performed analyses controlling for possible confounds and alternative explanations. Finally, we used diverse measurements of trust: In the context of close relationships, we assessed trust with the Rempel et al. (1985) instrument, and in the context of interactions between strangers we assessed trust with a self-report measure and with an economic game (Berg et al., 1995).

Conclusions

Trust is a complex phenomenon that involves two or more individuals. There are multiple reasons why people trust each other. The present work illuminates one important reason—the perception of another person's self-control—which influences people's decision to trust and rely on the other. Although the trustor's characteristics have been studied in previous research (see Simpson, 2007, for a review), our work highlights the role of the perception of the trustee's characteristics. Results from four experiments showed that people recognize another person's level of self-control, both as a dispositional trait and as a temporary state, and use it to determine that person's trustworthiness.

Interpersonal interactions can be challenging. They often require efforts to refrain from acting in an impulsive, self-interested manner and instead act according to relationship standards. Not surprisingly, people high in self-control are judged to be trustworthy partners: They are able to adhere to the relationships standards.

References

Ackerman, J. M., Goldstein, N. J., Shapiro, J. R., & Bargh, J. A. (2009). You wear me out: The vicarious depletion of self-control. *Psychological Science, 20,* 326–332. doi:10.1111/j.1467-9280.2009.02290.x

Balliet, D., Li, N. P., & Joireman, J. (2010). *Can trait self-control promote forgiveness in the absence of concern for others?* Manuscript submitted for publication.

Barkley, R. A. (2001). The executive functions and self-regulation: An evolutionary neuropsychological perspective. *Neuropsychology Review, 11,* 1–29. Retrieved from http://www.springerlink.com/content/104957/ doi:10.1023/A:1009085417776

Baumeister, R. F. (2005). *The cultural animal: Human nature, meaning, and social life.* New York, NY: Oxford University Press.

Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego depletion: Is the active self a limited resource. *Journal of Personality and Social Psychology, 74,* 1252–1265. doi:10.1037/0022-3514.74.5.1252

Baumeister, R. F., & Heatherton, T. F. (1996). Self-regulation failure: An overview. *Psychological Inquiry, 7,* 1–15. Retrieved from http://www.informaworld.com/smpp/title~content=t775648164~db=all doi: 10.1207/s15327965pli0701_1

Baumeister, R. F., Heatherton, T. F., & Tice, D. M. (1993). When ego threats lead to self-regulation failure: Negative consequences of high self-esteem. *Journal of Personality and Social Psychology, 64,* 141–156. doi:10.1037/0022-3514.64.1.141

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117,* 497–529. doi:10.1037//0033-2909.117.3.497

Baumeister, R. F., Schmeichel, B. J., & Vohs, K. D. (2007). Self-regulation and the executive function: The self as controlling agent. In A. W. Kruglanski & E. T. Higgins (Eds.), *Social psychology: Handbook of basic principles* (2nd ed., pp. 516–539). New York, NY: Guilford Press.

Baumeister, R. F., & Vohs, K. (2007). Self-regulation, ego depletion, and motivation. *Social and Personality Psychology Compass, 1,* 115–128. doi:10.1111/j.1751-9004.2007.00001.x

Berg, J. E., Dickhaut, J. W., & McCabe, K. A. (1995). Trust, reciprocity, and social history. *Games & Economic Behavior, 10,* 122–142. doi: 10.1006/game.1995.1027

Brennan, K. A., & Shaver, P. R. (1995). Dimensions of adult attachment, affect regulation, and romantic relationship functioning. *Personality and Social Psychology Bulletin, 21,* 267–283. doi:10.1177/ 0146167295213008

Brown, R. P. (2004). Vengeance is mine: Narcissism, vengeance and the tendency to forgive. *Journal of Research in Personality, 38,* 576–584. doi:10.1016/j.jrp.2003.10.003.

Cook, J., & Wall, T. (1980). New work attitude measures of trust, organizational commitment and personal need non-fulfillment. *Journal of Occupational Psychology, 53,* 39–52.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11,* 227–268. doi:10.1207/S15327965PLI1104_01

Deutsch, M. (1960). The effect of motivational orientation upon trust and suspicion. *Human Relations, 13,* 123–139. doi:10.1177/ 001872676001300202

DeWall, C. N., Baumeister, R. F., Gailliot, M. T., & Maner, J. K. (2008). Depletion makes the heart grow less helpful: Helping as a function of

self-regulatory energy and genetic relatedness. *Personality and Social Psychology Bulletin, 34,* 1653–1662. doi:10.1177/0146167208323981

DeWall, C. N., Baumeister, R. F., Stillman, T., & Gailliot, M. T. (2007). Violence restrained: Effects of self-regulation and its depletion on aggression. *Journal of Experimental Social Psychology, 43,* 62–76. doi:10.1016/j.jesp.2005.12.005

Fetchenhauer, D., & Dunning, D. (2009). Do people trust too much or too little? *Journal of Economic Psychology, 30,* 263–276. doi:10.1016/j.joep.2008.04.006

Finkel, E. J., & Campbell, W. K. (2001). Self-control and accommodation in close relationships: An interdependence analysis. *Journal of Personality and Social Psychology, 81,* 263–277. doi:10.1037/0022-3514.81.2.263

Finkel, E. J., Rusbult, C. E., Kumashiro, M., & Hannon, P. A. (2002). Dealing with betrayal in close relationships: Does commitment promote forgiveness. *Journal of Personality and Social Psychology, 82,* 956–974. doi:10.1037//0022-3514.82.6.956

Finkenauer, C., Engels, R. C. M. E., & Baumeister, R. F. (2005). Parenting behaviour and adolescent behavioural and emotional problems: The role of self-control. *International Journal of Behavioral Development, 29,* 58–69. doi:10.1080/01650250444000333

Finkenauer, C., Kerkhof, P., Righetti, F., & Branje, S. J. T. (2009). Living together apart: Perceived concealment as signal of exclusion in marital relationships. *Personality and Social Psychology Bulletin, 35,* 1410–1422. doi:10.1177/0146167209339629

Gurtman, M. B. (1992). Trust, distrust, and interpersonal problems: A circumplex analysis. *Journal of Personality and Social Psychology, 62,* 989–1002. Retrieved from http://www.apa.org/pubs/journals/psp/index.aspx doi:10.1037/0022-3514.62.6.989

Hayes, S. C., Gifford, E. V., & Ruckstuhl, L. E. (1996). Relational frame theory and executive function. In G. R. Lyon & N. A. Krasnegor (Eds.), *Attention, memory, and executive function* (pp. 279–305). Baltimore, MD: Paul H. Brookes.

Heatherton, T. F., & Vohs, K. D. (1998). Why is it so difficult to inhibit behavior? *Psychological Inquiry, 9,* 212–216. doi:10.1207/s15327965pli0903_4

Heider, F. (1958). *The psychology of interpersonal relations.* Hoboken, NJ: John Wiley & Sons Inc. doi:10.1037/10628-000

Hofmann, W., Friese, M., & Strack, F. (2009). Impulse and self-control from a dual-systems perspective. *Perspectives on Psychological Science, 4,* 162–176. doi:10.1111/j.1745-6924.2009.01116.x

Holmes, J. G., & Rempel, J. K. (1989). Trust in close relationships. In C. Hendrick (Ed.), *Close relationships* (pp. 187–220). Newbury Park, CA: Sage.

Jones, A. P., James, L. R., & Bruni, J. R. (1975). Perceived leadership behavior and employee confidence in the leader as moderated by job involvement. *Journal of Applied Psychology, 60,* 146–149. Retrieved from http://www.apa.org/pubs/journals/apl/index.aspx doi:10.1037/h0076359

Jones, E. E., & Davis, K. E. (1966). From acts to dispositions: The attribution process in social psychology. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vo. 2, pp. 219–266). New York, NY: Academic Press. doi:10.1016/S0065-2601(08)60107-0

Keelan, J. P. R., Dion, K. L., & Dion, K. K. (1994). Attachment style and heterosexual relationships among young adults: A short term panel study. *Journal of Social and Personal Relationships, 11,* 201–214. doi:10.1177/0265407594112003

Kelley, H. H. (1983). The situational origins of human tendencies: A further reason for the formal analysis of structures. *Personality and Social Psychology Bulletin, 9,* 8–30. Retrieved from http://psp.sagepub.com/ doi:10.1177/0146167283091003

Kelley, H. H., & Thibaut, J. W. (1978). *Interpersonal relations: A theory of interdependence.* New York: Wiley.

Kenny, D. A., Mannetti, L., Pierro, A., Livi, S., & Kashy, D. A. (2002). The statistical analysis of data from small groups. *Journal of Personality and Social Psychology, 83,* 126–137. doi:10.1037/0022-3514.83.1.126

Mayer, J. D., & Gaschke, Y. N. (1988). The experience and meta-experience of mood. *Journal of Personality and Social Psychology, 55,* 102–111. doi:10.1037/0022-3514.55.1.102

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review, 20,* 709–734. Retrieved from http://www.aom.pace.edu/amr/ doi:10.2307/258792

Mikulincer, M. (1998). Attachment working models and the sense of trust: An exploration of interaction goals and affect regulation. *Journal of Personality and Social Psychology, 74,* 1209–1224. doi:10.1037/0022-3514.74.5.1209

Muraven, M., Tice, D. M., & Baumeister, R. F. (1998). Self-control as limited resource: Regulatory depletion patterns. *Journal of Personality and Social Psychology, 74,* 774–789. doi:10.1037/0022-3514.74.3.774

Murray, S. L., Holmes, J. G., & Collins, N. L. (2006). Optimizing assurance: The risk regulation system in relationships. *Psychological Bulletin, 132,* 641–666. doi:10.1037/0033-2909.132.5.641

Osgood, C. E., Suci, G. J., & Tannenbaum, P. H. (1957). *The measurement of meaning.* Oxford, England: University of Illinois Press.

Peetz, J., & Kammrath, L. (2010). *Only because I love you: Why people make and why they break promises in romantic relationship.* Manuscript submitted for publication.

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, and Computers, 36,* 717–731. Retrieved from http://brm.psychonomic-journals.org/content/36/4/717.full.pdf+html

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40,* 879–891. doi:10.3758/BRM.40.3.879

Pronk, T. M., Karremans, J. C., Overbeek, G., Vermulst, A. A., & Wigboldus, H. J. (2010). What it takes to forgive: When and why executive functioning facilitates forgiveness. *Journal of Personality and Social Psychology, 98,* 119–131. doi:10.1037/a0017875

Pronk, T. M., Karremans, J. C., & Wigboldus, D. H. J. (2010). *How can you resist? Cognitive control helps people in a romantic relationship to stay faithful.* Manuscript submitted for publication.

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models* (2nd ed.). Thousand Oaks, CA: Sage.

Rawn, C. D., & Vohs, K. D. (in press). People use self-control to risk personal harm: An intra-interpersonal dilemma. *Personality and Social Psychology Review.*

Rempel, J. K., Holmes, J. G., & Zanna, M. P. (1985). Trust in close relationships. *Journal of Personality and Social Psychology, 49,* 95–112. doi:10.1037//0022-3514.49.1.95

Ritter, S. M., Karremans, J. C., & van Schie, H. T. (2010). The role of self-regulation in derogating attractive alternatives. *Journal of Experimental Social Psychology, 46,* 631–637. doi:10.1016/j.jesp.2010.02.010

Robinson, S. L. (1996). Trust and breach of the psychological contract. *Administrative Science Quarterly, 41,* 574–599. doi:10.2307/2393868

Ross, L. (1977). The intuitive psychologist and his shortcomings: Distortions in the attribution process. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 10, pp. 173–214). New York, NY: Academic Press. doi:10.1016/S0065-2601(08)60357-3

Rotter, J. B. (1971). Generalized expectancies for interpersonal trust. *American Psychologist, 26,* 443–452. Retrieved from http://www.apa.org/pubs/journals/amp/index.aspx doi:10.1037/h0031464

Rusbult, C. E., Martz, J. M., & Agnew, C. R. (1998). The Investment Model Scale: Measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Personal Relationships, 5,* 357–387. doi:10.1111/j.1475-6811.1998.tb00177.x

Rusbult, C. E., & Van Lange, P. A. M. (1996). Interdependence processes. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 564–596). New York, NY: Guilford Press.

Ryder, R. G., & Bartle, S. (1991). Boundaries as distance regulators in personal relationships. *Family Process, 30,* 393–406. doi:10.1111/j.1545-5300.1991.00393.x

Schlenker, B. R., Helm, B., & Tedeschi, J. T. (1973). The effects of personality and situational variables on behavioral trust. *Journal of Personality and Social Psychology, 25,* 419–427. Retrieved from http://www.apa.org/pubs/journals/psp/index.aspx doi:10.1037/h0034088

Schmeichel, B. J., Vohs, K. D., & Baumeister, R. F. (2003). Intellectual performance and ego depletion: Role of the self in logical reasoning and other information processing. *Journal of Personality and Social Psychology, 85,* 33–46. doi:10.1037/0022-3514.85.1.33

Shapiro, A., & Swensen, C. H. (1977). Self-disclosure as a function of self-concept and sex. *Journal of Personality Assessment, 41,* 144–149. Retrieved from http://www.informaworld.com/smpp/title~content=t775653663~db=all doi:10.1207/s15327752jpa4102_4

Simpson, J. A. (2007). Foundations of interpersonal trust. In A. W. Kruglanski & E. T. Higgins (Eds.), *Social psychology: Handbook of basic principles* (2nd ed., pp. 587–607). New York, NY: Guilford Press.

Sitkin, S. B., & Roth, N. L. (1993). Explaining the limited effectiveness of legalistic "remedies" for trust/distrust. *Organizational Science, 4,* 367–392. Retrieved from http://www3.informs.org/site/Organization_Science/ doi:10.1287/orsc.4.3.367

Sorrentino, R. M., Holmes, J. G., Hanna, S. E., & Sharp, A. (1995). Uncertainty orientation and trust in close relationships: Individual differences in cognitive styles. *Journal of Personality and Social Psychology, 68,* 314–327. doi:10.1037/0022-3514.68.2.314

Stapel, D. A., & Koomen, W. (2005). Competition, cooperation, and the effects of others on me. *Journal of Personality and Social Psychology, 88,* 1029–1038. doi:10.1037/0022-3514.88.6.1029

Stillman, T. F., & Alquist, J. L. (2007). *The perception of five-factor differences in unusual acquaintances.* Manuscript in preparation.

Tangney, J. P., Baumeister, R. R., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality, 72,* 271–324. doi:10.1111/j.0022-3506.2004.00263.x

Uleman, J. S. (1989). A framework for thinking intentionally about unintended thoughts. In J. S. Uleman & J. A. Bargh (Eds.), *Unintended thought* (pp. 425–449). New York, NY: Guilford Press.

Vohs, K. D., & Baumeister, R. F. (2010). *Self-regulatory resource depletion makes people selfish.* Unpublished manuscript.

Vohs, K. D., Baumeister, R. F., & Ciarocco, N. J. (2005). Self-regulation and self-presentation: Regulatory resource depletion impairs impression management and effortful self-presentation depletes regulatory resources. *Journal of Personality and Social Psychology, 88,* 632–657. doi:10.1037/0022-3514.88.4.632

Vohs, K. D., & Faber, R. J. (2007). Spent resources: Self-regulatory resource availability affects impulse buying. *Journal of Consumer Research, 33,* 537–547. doi:10.1086/510228

Vohs, K. D., Finkenauer, C., & Baumeister, R. F. (in press). The sum of friends' and lovers' self-control scores predicts relationship quality. *Social Psychological and Personality Science.*

Weiner, B. (1986). Attribution, emotion, and action. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition* (pp. 281–312). New York, NY: Guilford Press.

Wieselquist, J., Rusbult, C. E., Foster, C. A., & Agnew, C. R. (1999). Commitment, pro-relationship behavior, and trust in close relationships. *Journal of Personality and Social Psychology, 77,* 942–966. doi:10.1037/0022-3514.77.5.942

Zabelina, D. L., Robinson, M. D., & Anicha, C. L. (2007). The psychological tradeoffs of self-control: A multi-method investigation. *Personality and Individual Differences, 43,* 463–473. doi:10.1016/j.paid.2006.12.015

Appendix

Stimulus Material for Experiment 1 (Translated From Dutch)

High Self-Control Behavior Condition

"Lately I have some money problems . . . it's not that I'm in debt, but I definitely need to save some money for my further education which is really important for me! Last Wednesday I was around the city having a walk, and I ended up in my favorite Music shop. I was having a look at all the cool CDs available and at the new entries, but eventually I did not buy any CD."

Low Self-Control Behavior Condition

"Lately I have some money problems . . . it's not that I'm in debt, but I definitely need to save some money for my further education which is really important for me! Last Wednesday I was around the city having a walk, and I ended up in my favorite Music shop. I was having a look at all the cool CDs available and at the new entries, and I ended up buying many new CDs."

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